



UNITED STATES MARINE CORPS  
MARINE CORPS RECRUIT DEPOT/WESTERN RECRUITING REGION  
SAN DIEGO, CALIFORNIA 92140-5001

DepO 5103.3

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14 MAR 1996

DEPOT ORDER 5103.3

From: Commanding General

To: Distribution List

Subj: OCCUPATIONAL RESPIRATORY PROTECTION PROGRAM

Ref: (a) OPNAVINST 5100.23C

Encl: (1) Respirator Selection Guide

(2) Respirator Program Checklist

(3) Medical clearance for respirator use (Respirator Physical)

1. Purpose. To implement a Respiratory Protection Program (RPP) to prevent inhalation of potentially hazardous concentrations of materials released during operations for which engineering controls are not feasible or while such controls are being installed.

2. Background

a. The Occupational Safety and Health Administration requires that personnel shall be protected from those occupational diseases caused by breathing air containing hazardous concentrations of harmful dusts, mists, fumes, gases or vapors. The primary means of control shall be by engineering control measures. When effective engineering controls are not feasible, or while they are being instituted, control of personnel exposure shall be accomplished by the use of respirator protective equipment.

b. This Order provides the program administrator with minimal acceptable standards for the Respiratory Protection Program.

c. Those commands and/or departments that choose to utilize respiratory protection where it has been determined by the industrial hygiene department as not required will meet the requirements for this Order.

3. Overall Program Responsibilities

a. The Depot Safety Office will designate one of its members to act as the Respiratory Protection Program Manager (RPPM) for Marine Corps Recruit Depot, San Diego. Such individual will be trained to implement the RPP and will be given the following responsibilities:

(1) Monitor all aspects of the occupational RPP to ensure compliance with appropriate directives.

(2) Ensure that all individuals involved in the care, maintenance, testing and selection of respirators receive appropriate training.

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(3) Ensure that individuals who are to perform fit testing and appropriate record keeping are trained to conduct these tasks.

(4) Ensure that the Respirator Issuing Points (RIP) make available the appropriate respirators for all requirements.

(5) Ensure that annual evaluation, surveillance, (unless otherwise specified) and training is accomplished to comply with this Order.

(6) Ensure that medical examinations (respirator physicals) are current and documented prior to respirator fit testing. Unless otherwise specified, medical examinations remain valid for 5 years if conducted below age 35; 2 years if conducted age 35 to 45; 1 year if conducted beyond age 45.

(7) Ensure that respirator fit testing of all personnel required by the industrial hygienist to wear respirators is accomplished annually (semi-annually for lead and asbestos protection), based on the work hazards outlined in enclosure (1).

b. Commanding Officers will ensure that a Respiratory Protection Program is in place. Enclosure (2) of this Order provides guidance in this area.

c. Local command RPPM's will operate under the direction of the Depot Safety Office RPPM. Such individuals will be trained to implement the RPP locally and will be given the following responsibilities:

(1) Forward a copy of 40 hours RPPM certification to the Depot Safety Office.

(2) Monitor all aspects of the occupational RPP at the local level to ensure compliance with appropriate directives.

(3) Ensure that all individuals involved in the care, maintenance, and use of respirators receive appropriate training.

(4) Forward to each user a copy of all records of respirator training, physical examinations, and certificates of qualification to the Depot Safety Office RPPM.

(5) Consult the Depot Safety Office RPPM when situations arise that are not covered by this Order.

d. Collateral duty safety representatives and supervisors. Safety representatives and supervisors of individuals required to utilize respiratory protection shall be trained in the use, functional characteristics, and limitations of respirators. Safety representatives and supervisors will work together to accomplish the following responsibilities:

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(1) Ensure that a written standard operating procedure that governs the selection, care, issue and use of respirators for each job or operation requiring respiratory protection is complete and adhered to.

(2) Ensure that a proper respiratory protective device is being used when respiratory protection is required for each type of hazard listed in enclosure (1).

(3) Ensure respirators assigned for the exclusive use of one user receive filter changes or are disposed of in accordance with the manufacturer's specifications.

(4) Ensure respirators issued to more than one user are checked out, cleaned, sanitized and turned in to a central issue point (i.e., tool room) before issuing to another user.

(5) Provide safety measures such as life lines and safety rescue personnel when working in confined spaces or other environments which may require additional safety precautions.

(6) Ensure employees using respiratory protection undergo adequate training in the use, functional characteristics, and limitation of the respirator.

(7) Ensure employees whose duties require the use of a respirator are medically examined and found to be physically qualified. Employees unable to obtain written medical approval indicating physical qualification to use a respirator will not be assigned duties requiring the use of respirators. Schedule all pre-placement and periodic medical examinations prior to training and fit testing of personnel.

(8) Ensure respiratory protection is worn for personnel who are performing operations that are documented to be health hazardous, but where adequate sampling by the Industrial Hygiene Department has not yet been obtained.

(9) Ensure air line traps, filters, and line pressure regulators are serviced at least every ninety days. Equipment with expired due dates will not be used.

(10) Ensure all personnel involved in respirator care, maintenance, testing, selection, and record keeping programs perform these tasks at satisfactory standards and under the technical supervision of the RPPM.

e. The employee (user) will be responsible for his/her own respirator. Whether that respirator is assigned exclusively to one user or checked out from a centrally located issue point to different users, the employee will complete the following steps before each use:

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(1) Ensure the respirator has no holes, cracks, or leaks; all valves should be seated properly in place; and respirator straps should not be torn but flexible and function properly.

(2) Keep records of all respirator inspections to include the date and inspection results.

(3) Ensure the cartridge/filters used have not exceeded eight hours of use and have no defects.

(4) Replace the cartridge/filters when eight hours of use has been reached; the contaminant can be detected through the respirator and/or it becomes difficult to breathe.

(5) Use the proper respirator and cartridge/filters for the job.

(6) Leave the hazard area in the case of respirator failure.

(7) Ensure air line traps, filters, and line pressure regulators are serviceable and equipment service dates are current.

(8) Clean and disinfect respirators after use.

(9) Properly store respirators.

f. The Naval Hospital, Clinic, or Basic Aid Station Occupational Medical Officer will:

Conduct an appropriate pre-assignment physical examination to assess the status of an employee's physical condition and ensure that each employee is physically fit to wear a respirator. This examination will be done prior to the employee's initial fit test. Written medical approval will be submitted to the RPPM prior to fit testing. A copy will be kept in the individual's medical record and training record once all signatures are received.

g. The Industrial Hygiene Department will:

(1) Conduct initial surveys of work areas to identify the hazards listed in enclosure (1) and any others to ascertain the respiratory protection required by the workers.

(2) Provide technical assistance on respiratory protection to the Depot Safety Office RPPM, local command RPPM's, or any unit or department requesting information.

(3) Conduct continuous surveillance to assess potential hazardous conditions and work practices that may require respirator use. Provide feedback data that may be necessary in the selection of appropriate respiratory protection, and review command/department RPP's as part of Industrial Hygiene surveys.

h. Direct Support Stock Control will ensure that an adequate supply of respirators, approved by the Depot Safety Office RPPM, are maintained in the self-service system and that the proper selection of respirators are effected through a display of respirator charts and selection guides.

4. Procedures. Once the determination has been made that requires the use of respirators, they will be used unless otherwise instructed by the Depot Safety Office RPPM or the Industrial Hygiene Department. Those commands and/or departments that choose to utilize respiratory protection where it has been determined by the Industrial Hygiene Department not required will meet the requirements of this Order.

a. Selection of Respirators

(1) All respiratory protective systems used shall carry the National Institute for Occupational Safety and Health/Mine Safety and Health Administration (NIOSH/MSHA) approval.

(2) Respirators shall be selected with the following consideration:

- (a) Nature of the hazard.
- (b) Extent of the hazard.
- (c) Work requirements and condition.
- (d) Respirator limitations.

(3) The correct respirator shall be specified for each job by written work procedures (Standard Operating Procedures). Respiratory protection requirements for all new or revised processes shall be determined during the review of such processes by the Depot Safety Office RPPM and the Industrial Hygiene Department.

(4) Personnel engaged in issuing respirators shall be adequately instructed to ensure that the correct respirator is issued. In cases of uncertainty, the immediate supervisor will seek assistance through the command/department RPPM or the Depot Safety Office.

b. Respirator Use. All respirator users shall be properly instructed in the selection, inspection, fitting, use, maintenance and limitation of respirators.

(1) Approved equipment shall be used as issued. No modifications or substitution to issue equipment shall be permitted. Any modification, no matter how slight, will result in voiding the respirator approval.

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(2) The respirator fit shall be checked (positive and negative pressure check) each time the respirator is put on.

(a) Respirators shall not be worn when physical conditions prevent a good face seal. Some examples of these conditions are growth of a beard, sideburns, or a skull cap that projects under the face piece or temple pieces of eye glasses.

(b) No contacts shall be worn with respirators in contaminated atmospheres.

(3) General Conditions of Use

(a) Respirators issued (checked out) for one user only. Respirators must be returned to issue point, cleaned, and disinfected after each use.

(b) Personnel using respiratory protection shall be instructed to leave the hazard area if the contaminant is detected inside the respirator face piece. Re-entry shall not be undertaken until respirator integrity and fit, adequate air flow, or cartridge/filters replacement as appropriate, have been accomplished.

(4) Air-Supplied Respirators

(a) Air-supplied respirators shall be issued and used only with hoses and fittings as supplied for each application by the respirator manufacturer. The maximum usable hose length is that specified in the manufacturer's approval but at no time shall exceed 300 feet maximum.

1. High pressure systems. The hose shall be connected only to a source of compressed air meeting the specification of Grade D breathing air as described in reference (a). The connection shall be through a regulator and air filter system. The regulator shall be set to provide a minimum air flow rate of 4 Cubic Feet Per Minute (CFM) for full face and 6 CFM for loose fitting hoods or helmets.

2. Low pressure (ambient air) systems-the fresh air intake must be located in a clean area.

(b) Air-supplied respirators alone shall not be used in atmospheres that are Immediately Dangerous to Life and Health (IDLH). Air-supplied respirators must be equipped with an auxiliary self-contained air supply (escape bottle), or an air-storage receiver with an alarm. If entering an IDLH atmosphere, personnel shall be equipped with a safety harness and safety lines or other equivalent provision for rescue. Standby personnel must be present at the entry of such atmospheres known or suspected and shall remain in constant communication with personnel in the space. Standby personnel shall never enter the space.

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(c) Personnel using air-supplied respirators shall become familiar with the quick-release air line couplings for emergency escape.

(5) Self-Contained Breathing Apparatus (SCBA) require special training. Reference (a) provides guidance on (Grade D) breathing air requirements.

(6) Breathing air quality assurance (graded).

(a) SCBA training will be accomplished by the supplier or a qualified company.

(b) High pressure air supplied respirators will be accomplished by a qualified company.

(7) Physical Qualification. Supervisors of personnel required to use respiratory protection shall ensure that their personnel are physically qualified to wear respiratory protection prior to assignment to work involving air contaminants. Evaluations will be accomplished by respective medical facilities in accordance with established criteria.

c. Training

(1) All supervisors and their personnel involved in respiratory protection shall be instructed by personnel from the Depot Safety Office.

(2) Training shall include:

(a) Information on airborne contaminants to which personnel may be exposed and the effects on health due to such exposures.

(b) Information on limitations of engineering controls in certain cases of respiratory hazards.

(c) Instruction on the proper fitting of respirators.

(d) Instruction on respirator construction, operating principles, and limitations.

(e) Instruction on the storage, inspection, maintenance, and cleaning of respirators.

(f) Information on the significance and requirements of NIOSH/MSHA approval with respect to respiratory protection.

(3) During training, personnel shall be given an opportunity to handle the respirator, ensure proper fit, test face piece-to-face seal, wear it in ambient air for a familiarization period, and wear it in a test atmosphere.

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d. Maintenance and Care of Respirators

(1) Inspection for Defects

(a) All respirators shall be inspected routinely before and after use. The respirator inspection shall include the condition of the face piece, headbands, valves, cartridge/filters, and connecting hoses where applicable.

(b) Respirators kept ready for emergency use shall be inspected after each use and at least monthly to ensure that they are in satisfactory working condition. A record of these inspections shall be kept and will include the inspection date and results.

(c) SCBA shall be inspected monthly. The inspection shall include checks for the proper function of regulators and warning devices. Air cylinders shall be fully charged according to manufacturer's instructions.

(2) Cleaning and Disinfecting

(a) Respirators, other than those for emergency use, shall be turned in, cleaned, and disinfected after each use.

(b) Respirators maintained for emergency use shall be cleaned and disinfected after each use.

(c) Each respirator user shall be briefed on the cleaning procedures of respirators.

(d) Cleaning procedures shall be in accordance with reference (a).

(3) Repair

(a) Replacement of repairs shall be done only by trained, experienced persons using parts designed for the respirator.

(b) No attempt shall be made to replace components or to make modifications or repairs beyond the manufacturer's recommendations.

(c) Reducing or admission valves and regulators shall be returned to the manufacturer for service.

(4) Storage of Respirators

(a) Cleaned respirators shall be stored away from dust, sunlight, heat, extreme cold, excessive moisture, damaging chemicals, and without distortion (i.e., items placed on top).

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(b) Freshly cleaned respirators shall be placed in a reusable plastic bag until reissue; they should be stored in a clean dry location away from direct sunlight. They should be stored in a single layer with the face piece and exhalation valve in a position to prevent the rubber or plastic from taking a permanent distortion.

e. Purchase

- (1) Only NIOSH/MSHA approved respirators will be purchased.
- (2) To ensure that all replacement parts furnished are NIOSH/MSHA approved, these parts, including cartridge and filters, shall be purchased from the same manufacturer as the original respirator.
- (3) Questions regarding the procurement of respirators not stocked or NIOSH/MSHA approved, shall be addressed to the RPPM. The industrial hygienist may be consulted by the Depot Safety Office RPPM for technical guidance and concurrence.

f. Surveillance of Work Area. Supervisors who assign personnel to operations that utilize respiratory protection shall inspect the operation frequently to ensure conditions and degree of employee exposure have not changed. If a doubt exists as to the degree of exposure or adequacy of the respirator provided, the operation shall be stopped until appropriate information and consultation have been received and action has been taken to resolve the problem.

g. Evaluation of Respiratory Protection Program

- (1) The Depot Safety Office RPPM shall ensure at least annual evaluation of program effectiveness.
- (2) The Depot Safety Office and Industrial Hygiene personnel during their regular inspection of work facilities and operations shall ensure proper respirators have been selected for operations requiring respiratory protection. Additionally, they will ensure that respirators are in proper use and that a sanitary area, as described by this Order, is provided for storage.

5. Action. Commanding Officers will ensure that the occupational RPP is implemented in accordance with this Order.



J. M. GUERIN  
Chief of Staff

DISTRIBUTION: A



RESPIRATOR SELECTION GUIDE

All respiratory protective systems used shall be NIOSH/MSHA approved. The use of properly located engineering controls shall be considered and determined to be not feasible before personnel are required to use respiratory protection. The recommendation for respirator type is based on estimates of maximum concentrations which may be produced by the operation.

Changes in the process may require a different degree of respiratory protection. Information regarding other types of exposure or questions regarding use of this guide should be referred to the Depot Safety Office Respiratory Protection Program Manager for consultation with the Naval Hospital Industrial Hygiene Department.

The following list contains the types of respiratory protection, the NIOSH/MSHA approval ("TC") number that pertains to each type of respirator and appropriate cartridge and filters, and a simple code number that will enable the matching of respiratory equipment with typical exposure also listed below.

<u>Code</u>	<u>Respirator Type</u>	<u>Approval Number ("X" = variable)</u>
1.	Self-Contained Breathing Apparatus (SCBA)	TC-13F-XXX
2.	Gas masks with appropriate canister	TC-14G-XXX
3.	Supplied-air ("air-line") respirator	TC-19C-XXX
4.	Dust, Fume, Mist, and/or HEPA	TC-21C-XXX
5.	Chemical Cartridge	TC-23C-XXX
6.	Combination Chemical Cartridge & Dust, Fume, Mist, and/or HEPA	TC-23C-XXX

Notes: 1) Chemical Cartridges are designed and required for specific substances.

2) Supplied-air respirator systems often require a 5 minute self contained auxiliary bottle (aka "escape bottle" or "back up bottle").

<u>Typical Exposures</u>	<u>Code</u>
Air arcing	4
Ammonia (cylinder leaks)	2 or 3
Abrasive blasting	3
Abrasive blasting; hopper tender	4
Asbestos	3 or 4 (HEPA)
Asbestos rip-out	1 or 3 w/auxiliary bottle

ENCLOSURE (1)

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Typical Exposures (continued)	Code
Beryllium: cutting	3 or 4
Boiler refractory chipping	3
Brazing	4
Brazing: using cadmium bearing material	3
Cement and concrete dust	4
Chlorine gas (cylinder leak, etc.)	1 or 2
Chromic acid mist	5 or 6
Cleaning tank maintenance	3
Cutting, grinding, buffing (no lead, chromatic or zinc)	4
Electroplating: chromic, sulfuric, hydrochloric acid	2 or 3
Fiberglass installation	4
Fiberglass rip-out	3
Handling dry chemicals	4
Inert gases: nitrogen, helium, argon, etc.	1 or 3 with auxiliary bottle
Insecticides and rodenticides-(pesticides)	1, 2, 3 or 6
Lead bonding	3
Lead sawing	4
Lye dust and mist	4
Mercury vapor	1 or 3
Oil mist and smoke	3 or 6
Organic phosphate spray or mist (cellulube)	3
Organic phosphate insecticide	1, 2 or 6
Oxygen deficiency	1 or 3 with auxiliary bottle
Painting: brushing interior	5
Painting: spray booth	3
Plastics work: solvent exposure in shop, ship	5
Plastics work: solvent exposure in confined space	3 with auxiliary bottle
Scaling	4
Scaling: lead or chromate containing paint	4
Solvent cleaning	5
Solvent cleaning: confined space	3 with auxiliary bottle
Void spaces: not tested	1
Welding	6
Welding: confined space	3
Woodworking	4

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**RESPIRATOR PROGRAM CHECKLIST**

The Respirator Program should be evaluated at least annually with program adjustments, as appropriate, made to reflect the evaluation results. Program functions can be separated into administration and operation.

The following checklist may be used at the command level as a guideline to ensure regulatory compliance.

**A. Program Administration**

1. Is there a written policy which acknowledges the Commanding Officer's responsibility for providing a safe and healthful workplace and assigns programs for responsibility, accountability, and authority?
2. Is there a written Standard Operating Procedure that governs the selection, care, issue, and use of respirators for each job or operation requiring respiratory protection?
3. Is program responsibility vested in one individual who is knowledgeable and who can coordinate all aspects of the program at the job site?
4. Can feasible engineering controls or work practices eliminate need for respirators?
5. Has an industrial hygiene survey been performed in all work areas that may be, for any reason, suspected of health hazards?

**B. Program Operation**

1. Are work area conditions and employee exposures properly surveyed?
2. Are respirators selected on the basis of hazards to which the employee is exposed?
3. Are selections made by individuals who are knowledgeable of proper selection procedures?
4. Are only approved respirators purchased and used; do they provide adequate protection for the specific hazard and concentration of the containment?
5. Has a medical evaluation of the prospective user been made to determine physical and psychological ability to wear the selected respirator equipment?

ENCLOSURE (2)

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6. Where practical, have respirators been issued to the users for their exclusive use and are there records covering issuance?

7. Are respirators that may be checked out to more than one user returned to the check-out point, cleaned, and disinfected after each use?

8. Are the users given the opportunity to try on several respirators to determine whether the respirator they will subsequently be wearing is the best fitting one?

9. Is the fit tested annually?

10. Are those users who require corrective lenses properly fitted?

11. Are users prohibited from wearing contact lenses when using respirators?

12. Is the face piece-to-face seal tested in a test atmosphere?

13. Are workers prohibited from entering contaminated or suspected contaminated areas when they have facial hair or other characteristics which prohibit the use of tight-fitting face pieces?

14. Are respirators being worn correctly?

15. Are workers wearing respirators at all times while in contaminated or suspected contaminated areas?

16. Are respiratory protection systems properly maintained?

17. Are respirators cleaned and disinfected after each use?

18. Are proper methods of cleaning and disinfecting utilized?

19. Are respirators stored in a manner so as to protect them from dust, sunlight, heat, excessive cold or moisture, or damaging chemicals?

20. Is there a central issue/check-out point for respirators?

21. Are respirators inspected before and after each use and during cleaning?

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22. Are qualified individuals/users instructed in inspection techniques?

23. Are respirators that are kept ready for emergency use inspected after each use and at least monthly to ensure that they are in satisfactory working condition? Are records kept of these inspections? Do they include the inspection dates and results?

24. Are replacement parts used in respirator repair those of the manufacturer of the respirator?

25. Is a procedure developed for respiratory protection in confined spaces?

26. Are personnel engaged in issuing of respirators adequately instructed to ensure that the correct respirator is issued?

27. Are users trained in proper respirator use, cleaning, and inspection?

28. Are proper record keeping procedures being utilized for each individual trained in respiratory protection?

29. Has an appropriate entry been made in a Marine's Service Record Book (SRB) (i.e., page 11) regarding the issue of a respirator?

ENCLOSURE (2)

10/10/10

10/10/10

10/10/10

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MEDICAL QUESTIONNAIRE FOR RESPIRATOR USERS

NAME \_\_\_\_\_ SSN \_\_\_\_\_
UNIT/DEPARTMENT \_\_\_\_\_ SUPERVISOR \_\_\_\_\_
DATE \_\_\_\_\_ DOB \_\_\_\_\_ AGE \_\_\_\_\_ HEIGHT \_\_\_\_\_ WEIGHT \_\_\_\_\_

HAVE YOU EVER WORN A RESPIRATOR? YES NO

IF YES, DESCRIBE ANY APPARENT DIFFICULTIES NOTED WITH USE: \_\_\_\_\_

\*\*\*\*\*

Table with 3 columns: Question, YES, NO. Contains 16 medical conditions for screening.

EXPLAIN YES ANSWERS: \_\_\_\_\_

EMPLOYEE SIGNATURE

ENCLOSURE (3)

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MEDICAL CLEARANCE FOR RESPIRATOR USE (RESPIRATOR PHYSICAL)

LAST NAME, FIRST, MI SSN DATE OF BIRTH AGE

SUPERVISOR UNIT/DEPARTMENT PHONE

Circle Type(s) of Respirator(s) to be used:

- 1. Air Purifying (non-powered)
2. Air Purifying (powered)
3. Combination Air Line and (aux) SCBA
4. Air line (supplied-air) Respirator
5. Self Contained Breathing Apparatus

Extent of usage:

- 1. Daily
2. Occasionally - more than once a week
3. Rarely
4. Emergency Only

Level of work efforts: 1. Light 2. Moderate 3. Heavy 4. Strenuous

Anticipated usage time (for each use) in hours:

Special Work Considerations (i.e., hazardous material, confined spaces, protective clothing etc.):

DATE SUPERVISORS SIGNATURE

\*\*\*\*\*

PHYSICIAN'S EVALUATION:

- Class: (circle one)
1. No restriction on respirator use
2. Some specific use restrictions
3. No respirator use permitted

Restriction:

DATE EXAMINING MEDICAL OFFICER SIGNATURE

\*\*\*\*\*

This employee has received the required respiratory training as outlined in ANSI Standard Z88.6 and required by OPNAVINST 5100.23C within the last year. The employee has been fit tested (qualitative or quantitative) for the following respirator.

TYPE (AP, Supl., Air, SCBA) MAKE & MODEL RESPIRATOR SIZE

DATE Respiratory Protection Program MANAGER SIGNATURE

ENCLOSURE (3)